Amendment to the Claims:

This listing of claims replaces all prior versions, and listings, of claims in the application:

1. (Previously Presented) A method of making a composite laminate material comprising:

interleaving

a plurality of first foils made from one or more of first metals and metal alloys, with

a plurality of second foils made from one or more of second metals and metal alloys suitable to react with the one or more of the first metal and metal alloys to produce a hard intermetallic compound, and wherein the one or more of the second metals and metal alloys are selected from the group consisting of aluminum and alloys of aluminum; and

reacting in situ under heat and pressure in the presence of atmospheric gases the plurality of first foils with the plurality of second foils so as to substantially completely react the one or more of the second metals and metal alloys with the one or more of the first metal and metal alloys, forming where each second metal foil had been a region of a hard intermetallic compound;

wherein a composite laminate material having (i) layers of the one or more of the first metals and metal alloys, interspersed with (ii) regions of the hard intermetallic compound, is made.

2. (Previously Presented) A method of making a composite laminate material comprising:

interleaving

a plurality of first foils made from one or more of first metals and metal alloys from the group consisting of titanium, nickel, vanadium, iron and alloys and combinations of titanium, nickel, vanadium and iron, with

a plurality of second foils made from one or more of second metals and metal alloys from the group consisting of aluminum and alloys of aluminum; and

reacting under heat and pressure in the presence of atmospheric gases the plurality of first foils with the plurality of second foils so as to substantially completely react the one or more of the second metals and metal alloys with the one or more of the first metal and metal alloys, forming where each second metal foil had been a region of a hard intermetallic compound;

wherein a composite laminate material having (i) layers of the one or more of the first metals and metal alloys, interspersed with (ii) regions of the hard intermetallic compound, is made.

3. (Previously Presented) The method of making a composite laminate material according to claim 1 or claim 2 wherein the reacting under heat and pressure comprises:

placing the interleaved pluralities of first foils and second foils under pressure:

raising the temperature of the pressured interleaved foils to (i) less than a melting point of the one or more of the second metals and metal alloys but (ii) sufficiently high so that, at pressure, solid state diffusion occurs between the interleaved foils, physically locking the foils in place;

further raising the temperature of the pressured, diffused, locked interleaved foils until all the one or more of the second

metals and metal alloys are reacted with the one or more of the first metals and metal alloys to form the intermetallic compound, this raising being done sufficiently slowly and under sufficient continuing pressure so that, despite the facts that the reacting proceeds with increasing difficulty and an ultimate high temperature reached is greater than a melting point of the one or more of the second metals and metal alloys, the one or more of the second metals and metal alloys remain initially locked in place and ultimately become reacted without squirting in liquid state from between the first foils; and

cooling the composite laminate material as is made from (i) layers of the one or more of the first metals and metal alloys, interspersed with (ii)regions of the hard intermetallic compound, to room temperature;

wherein each of the placing, raising, further raising, and cooling transpires in the presence of atmospheric gases;

wherein the second foils become completely reacted with the first foils nonetheless that the temperature of liquefaction of the at least one of the second metals and metal alloys from which the second foils are made is exceeded in the process.

4. (Original) The method according to claim 1 or claim 2 wherein the interleaving is of a pluralities of first and second foils more numerous than ten.

5. (Previously Presented) The method according to claim 1 or claim 2 wherein the interspersing is of pluralities of first and second foils having thicknesses in the range of 0.1 mm to 1 mm.

6. (Previously Presented) The method according to claim 1 or claim 2 wherein the interspersing is of pluralities of first and second foils having thicknesses less than 0.2 mm.

7. (Original) The method according to claim 1 or claim 2 wherein the maximum temperature of the reacting is in the range from 600-800°C.

8. (Original) The method according to claim 1 or claim 2 wherein the reacting under heat and pressure comprises:

pressuring in a mechanical press.

9. (Original) The method according to claim 1 or claim 2 wherein the reacting under heat and pressure comprises:

pressuring in a load frame.

10. (Original) The method according to claim 1 or claim 2 wherein the reacting under heat and pressure is under a maximum pressure in the range from 1-10 megapascals.

11-12. Canceled.

13. (Previously Presented) The method according to claim 1 or claim 2 wherein the one or more of the first metals and metal alloys have a plane strain fracture toughness, in the state of the first metals and metal alloys that is assumed upon completion of the method, of greater than 40 $MPa(m)^{1/2}$, and the one or more of the second metals and metal alloys are suitable to compound with the first metal and metal alloys to produce the intermetallic compound having a Vickers microhardness of greater than 400 kg/mm^2.

14-15. Canceled.

16. (Previously Presented) The method according to claim 1 or claim 2

wherein the laminating is of one or more first metals and metal alloys drawn from the group consisting of titanium, nickel, vanadium and iron, and combinations of titanium, nickel, vanadium, and iron.

17. Canceled.

18. (Original) The method according to claim 1 or claim 2 producing the composite laminate material in a non-planar contour so as to improve its penetration resistance.

19. (Original) The method according to claim 1 or claim 2 producing the composite laminate material in corrugated form so as to improve its penetration resistance.

20. Canceled.

21. (Previously Presented) The method according to claim 1 or claim 2, wherein the composite laminate material has a density between 3 and 4.5 grams per cubic centimeter.

22. (Previously Presented) The method according to claim 1 or claim 2, wherein the composite laminate material has a density less that 6 grams per cubic centimeter.

23. (Previously Presented) The method according to claim 1 or claim 2

wherein the interleaving is of the plurality of first foils and the plurality of second foils under stress;

wherein the produced composite laminate material has residual internal stresses between its metal layers and its intermetallic regions.

24. (Original) The composite laminate material produced by the method according to claim 1 or claim 2 adapted for use as armor.

25. (Original) The method according to claim 1 or claim 2

wherein the interleaving is of metal layers that are in a three-dimensional, non-planar, contour;

wherein the intermetallic regions are in a three-dimensional, non-planar, contour congruent with the contour of the metal layers;

whereby the produced composite laminate material is in a three-dimensional, non-planar, contour.

26. (Original) The method according to claim 1 or claim 2

wherein the interleaving is of metal layers that are in a corrugated contour; and

wherein the intermetallic regions are in a corrugated contour congruent with the contour of the metal layers;

whereby the produced composite laminate material is in a corrugated contour.

27. (Original) The method according to claim 1 or claim 2

wherein the interleaving is of metal layers that are both greater than 10 in number and larger than 100 cm^2 in area.

28. (Previously Presented) The method according to claim 1 or claim 2

wherein the composite laminate material produced is characterized in that its metal layers have a toughness, in the state of the metals and metal alloys that is assumed upon completion. of the method, of greater than 40 $MPa(m)^{1/2}$.

29. (Original) The method according to claim 1 or claim 2

wherein the composite laminate material produced is characterized in that its regions of intermetallic material have a Vickers microhardness of greater than 400 kg/mm2.

30-40. Canceled.

41. (Original) The method according to claim 1 or claim 2

wherein the interleaving is of metal layers that are of differing thickness.

42. (Original) The method according to claim 1 or claim 2

wherein the interleaving is of intermetallic regions that are of differing thickness.

43. (Original) The method according to claim 1 or claim 2

wherein the interleaving is of the plurality of first foils and the plurality of second foils under stress;

wherein the produced composite laminate material has such residual internal stresses between the metal layers and intermetallic regions as do serve to more substantially deflect

a penetrating projectile from off its axis of impact than would be the case for the same penetrating projectile without the residual internal stresses.

44-49. Canceled

50. (Previously Presented) A method of making a composite laminate material, comprising:

interleaving (1)a plurality of first foils made from one or more of first metals and metal alloys, with (2) a plurality of second foils made from one or more of second metals and metal alloys suitable to react with the one or more of the first metal and metal alloys to produce a hard intermetallic compound; and

reacting in situ under heat and pressure in the presence of atmospheric gases the plurality of first foils with the plurality of second foils so as to substantially completely react the one or more of the second metals and metal alloys with the one or more of the first metal and metal alloys to form where each second metal foil had been a region of a hard intermetallic compound,

wherein the maximum temperature of the reacting is in the range from 600-800°C.

51. (Previously Presented) A method of making a composite laminate material, comprising:

interleaving (1)a plurality of first foils made from one or more of first metals and metal alloys, with (2) a plurality of second foils made from one or more of second metals and metal alloys suitable to react with the one or more of the first metal and metal alloys to produce a hard intermetallic compound; and

reacting in situ under heat and pressure in the presence of atmospheric gases the plurality of first foils with the plurality of second foils so as to substantially completely react the one or more of the second metals and metal alloys with the one or more of the first metal and metal alloys to form where each second metal foil had been a region of a hard intermetallic compound,

wherein the one or more of the first metals and metal alloys have a plane strain fracture toughness, in the state of the first metals and metal alloys that is assumed upon completion of the method, of greater than 40 $MPa(m)^{1/2}$, and the one or more of the second metals and metal alloys are suitable to compound with the first metal and metal alloys to produce the intermetallic compound having a Vickers microhardness of greater than 400 kg/mm^2.

52. (Previously Presented) A method of making a composite laminate material, comprising:

interleaving (1)a plurality of first foils made from one or more of first metals and metal alloys, with (2) a plurality of second foils made from one or more of second metals and metal alloys suitable to react with the one or more of the first metal and metal alloys to produce a hard intermetallic compound; and

reacting in situ under heat and pressure in the presence of atmospheric gases the plurality of first foils with the plurality of second foils so as to substantially completely react the one or more of the second metals and metal alloys with the one or more of the first metal and metal alloys to form where each second metal foil had been a region of a hard intermetallic compound,

wherein the composite laminate material has a density between 3 and 4.5 grams per cubic centimeter.

53. (Previously Presented) A method of making a composite laminate material, comprising:

interleaving (1)a plurality of first foils made from one or more of first metals and metal alloys, with (2) a plurality of second foils made from one or more of second metals and metal alloys suitable to react with the one or more of the first metal and metal alloys to produce a hard intermetallic compound; and

reacting in situ under heat and pressure in the presence of atmospheric gases the plurality of first foils with the plurality of second foils so as to substantially completely react the one or more of the second metals and metal alloys with the one or more of the first metal and metal alloys to form where each second metal foil had been a region of a hard inter-metallic compound,

wherein the composite laminate material has a density less that 6 grams per cubic centimeter.

54. (Previously Presented) The method according to claim 50, wherein the reacting under heat and pressure is under a pressure from 1-10 megapascals.

55. (Previously Presented) The method according to claim 50, wherein the interspersing is of pluralities of first and second foils having thicknesses in the range of 0.1 mm to 1 mm.

56. (Previously Presented) The method according to claim 50, wherein the interspersing is of pluralities of first and second foils having thicknesses less than 0.2 mm.

57. (Previously Presented) The method according to claim 50, wherein the one or more first metals and metal alloys comprise at least one of titanium, nickel, vanadium, iron, and a combination of titanium, nickel, vanadium, and iron.

58. (Currently Amended) The method according to claim 57, wherein the one or more of the [[first]] **second** metals and metal alloys comprise at least one of aluminum and an alloy of aluminum.

59. (Previously Presented) The method according to claim 52, wherein the reacting under heat and pressure is under a pressure from 1-10 megapascals.

60. (Previously Presented) The method according to claim 51, wherein the interspersing is of pluralities of first and second foils having thicknesses in the range of 0.1 mm to 1 mm.

61. (Previously Presented) The method according to claim 51, wherein the interspersing is of pluralities of first and second foils having thicknesses less than 0.2 mm.

62. (Previously Presented) The method according to claim 51, wherein the one or more first metals and metal alloys comprise at least one of titanium, nickel, vanadium, iron, and a combination of titanium, nickel, vanadium, and iron.

63. (Currently Amended) The method according to claim 62, wherein the one or more of the [[first]] **second** metals and metal

alloys comprise at least one of aluminum and an alloy of aluminum.

64. Canceled.

65. (Previously Presented) The method according to claim 52, wherein the interspersing is of pluralities of first and second foils having thicknesses in the range of 0.1 mm to 1 mm.

66. (Previously Presented) The method according to claim 52, wherein the interspersing is of pluralities of first and second foils having thicknesses less than 0.2 mm.

67. (Currently Amended) The method according to claim 52, wherein the one or more [[first]] **second** metals and metal alloys comprise at least one of titanium, nickel, vanadium, iron, and a combination of titanium, nickel, vanadium, and iron.

68. (Previously Presented) The method according to claim 67, wherein the one or more of the first metals and metal alloys comprise at least one of aluminum and an alloy of aluminum.

69. (Previously Presented) The method according to claim 53, wherein the reacting under heat and pressure is under a pressure from 1-10 megapascals.

70. (Previously Presented) The method according to claim 53, wherein the interspersing is of pluralities of first and second foils having thicknesses in the range of 0.1 mm to 1 mm.

71. (Previously Presented) The method according to claim 53, wherein the interspersing is of pluralities of first and second foils having thicknesses less than 0.2 mm.

72. (Previously Presented) The method according to claim 53, wherein the one or more first metals and metal alloys comprise at least one of titanium, nickel, vanadium, iron, and a combination of titanium, nickel, vanadium, and iron.

73. (Currently Amended) The method according to claim 72, wherein the one or more of the [[first]] second metals and metal alloys comprise at least one of aluminum and an alloy of aluminum.